

Homelite®

OWNERS MANUAL

PROPANE CONSTRUCTION HEATER

Model HP155A
UT65052-A



Indicates Warning,
Danger, and Caution



Read all Safety, Operating,
and Maintenance
Instructions



GENERAL HAZARD WARNING:

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.

ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT THE MANUFACTURER.




SECOND EDITION
PART NO. 18584-A
Printed In U.S.A.
Price \$1.00

CONTENTS

SECTION	PAGE
Safety Information	2
Product Identification	4
Unpacking	4
Theory of Operation	5
Propane Supply	6
Installation	6
Ventilation	7
Operation	8
Storage	9
Maintenance	9
Preventative Maintenance Schedule	9
Service Procedures	10
Specifications	11
Wiring Diagram	11
Illustrated Parts List	12-13

SAFETY INFORMATION

WARNINGS

 **WARNING: FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.**

WARNING

NOT FOR HOME OR RECREATIONAL VEHICLE USE.

The heater is designed for use as a construction heater in accordance with ANSI Z83.7•CGA2.14. Other standards govern the use of fuel gases and heating products for specific uses. Your local authority can advise you about these. The primary purpose of construction heaters is to provide temporary heating of buildings under construction, alteration or repair. Properly used, the heater provides safe economical heating. Products of combustion are vented into the area being heated.

We cannot foresee every use which may be made of our heaters. **Check with your local fire safety authority if you have questions about heater use.**

Other standards govern the use of fuel gases and heat producing products for specific uses. Your local authorities can advise you about these.

Carbon Monoxide Poisoning: Some people are more affected by carbon monoxide than others. Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, and/or nausea. If you have these signs, the heater may not be working properly. **Get fresh air at once!** Check for proper ventilation and have heater serviced.

Safety Information continues on next page

SAFETY INFORMATION

Continued

WARNINGS

Propane Gas: Propane gas is odorless. An odor-making agent is added to propane gas. The odor helps you detect a propane gas leak. However, the odor added to propane gas may fade. Propane gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.

- Install and use heater with care. Follow all local ordinances and codes. In the absence of local ordinances and codes, refer to the *Standard for Storage and Handling of Liquefied Petroleum Gas, ANSI/NFPA 58* and the *Natural Gas Installation Code, CAN/CGA B149.2*. This instructs on the safe storage and handling of propane gases.
- Use only the electrical voltage and frequency specified on model plate.
- The electrical connections and grounding of the heater shall follow the National Electric Code, ANSI/NFPA 70 or Canadian Electric Code, Part 1.
- Electrical grounding instructions — This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.
- Use only a three-prong, grounded extension cord.
- Use only the hose and factory preset regulator provided with the heater.
- Use only propane gas set up for vapor withdrawal.
- Provide adequate ventilation. Before using heater, provide at least a four and one half (4.5)-square-foot opening of fresh, outside air for each 100,000 Btu/Hr of rating. This heater produces carbon monoxide, which is listed by the State of California as a reproductive toxin under Proposition 65.
- For indoor use only. Do not use heater outdoors.
- Do not use heater in occupied dwellings or in living or sleeping quarters.
- Do not use heater below ground level. Propane gas is heavier than air. If a leak occurs, propane gas will sink to the lowest possible level.
- Keep appliance area clear and free from combustible materials, gasoline, paint thinner, and other flammable vapors and liquids. Do not use heater in areas with high dust content.
- Minimum heater clearances from combustibles:
Outlet: 8 Ft. Sides: 2 Ft. Top: 6 Ft. Rear: 2 Ft.
- Keep heater at least six feet from propane tank(s). Do not point heater at propane tank(s) within 20 feet.
- Keep propane tank(s) below 100° F.
- Check heater for damage before each use. Do not use a damaged heater.
- Check hose before each use of heater. If highly worn or cut, replace before using heater.
- Locate heater on stable and level surface if heater is hot or operating.
- Not intended for use on finished floors.
- Never block air inlet (rear) or air outlet (front) of heater.
- Keep heater away from strong drafts, water spray, rain, or dripping water.
- Do not leave heater unattended.
- Keep children and animals away from heater.
- Never move, handle, or service a hot, operating, or plugged-in heater. Severe burns may result. Wait 20 minutes after turning heater off.
- To prevent injury, wear gloves when handling heater.
- Never attach duct work to heater.
- Do not alter heater. Keep heater in its original state.
- Do not use heater if altered.
- Turn off propane supply and unplug heater when not in use.
- Use only original replacement parts. This heater must use design-specific parts. Do not substitute or use generic parts. Improper replacement parts could cause serious or fatal injuries.

PRODUCT IDENTIFICATION

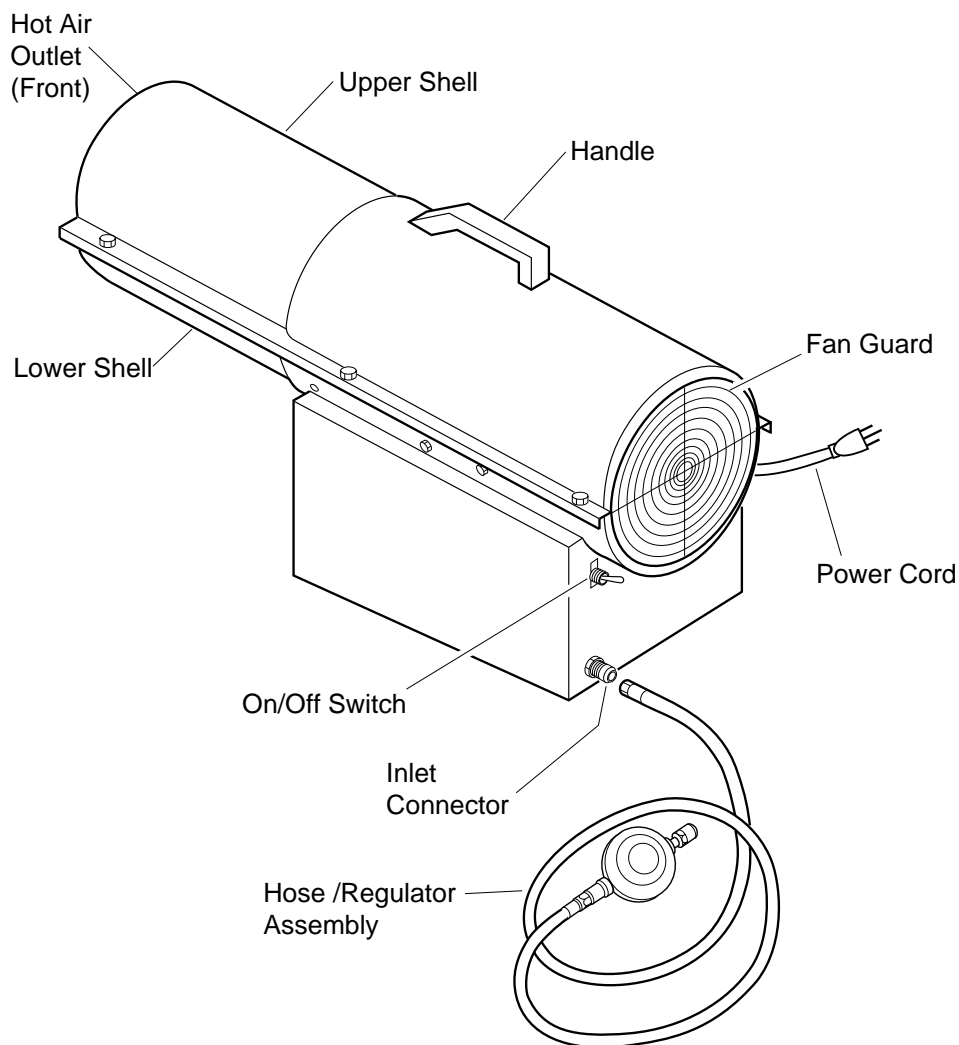


Figure 1 - HP155A

UNPACKING

1. Remove all packing items applied to heater for shipment. Keep plastic cover caps (attached to inlet connector and hose/regulator assembly) for storage.
2. Remove all items from carton.
3. Check all items for shipping damage. If heater is damaged, promptly inform dealer where you bought heater.

THEORY OF OPERATION

The Fuel System: The hose/regulator assembly attaches to the propane gas supply. The propane gas moves through the solenoid valve and out the nozzle.

The Air System: The motor turns the fan. The fan pushes air into and around the combustion chamber. This air is heated and provides a stream of clean, hot air.

The Ignition System: The direct spark ignitor (DSI) sends voltage to the ignitor. The ignitor ignites the fuel and air mixture.

The Safety Control System: This system causes the heater to shut down if the flame goes out.

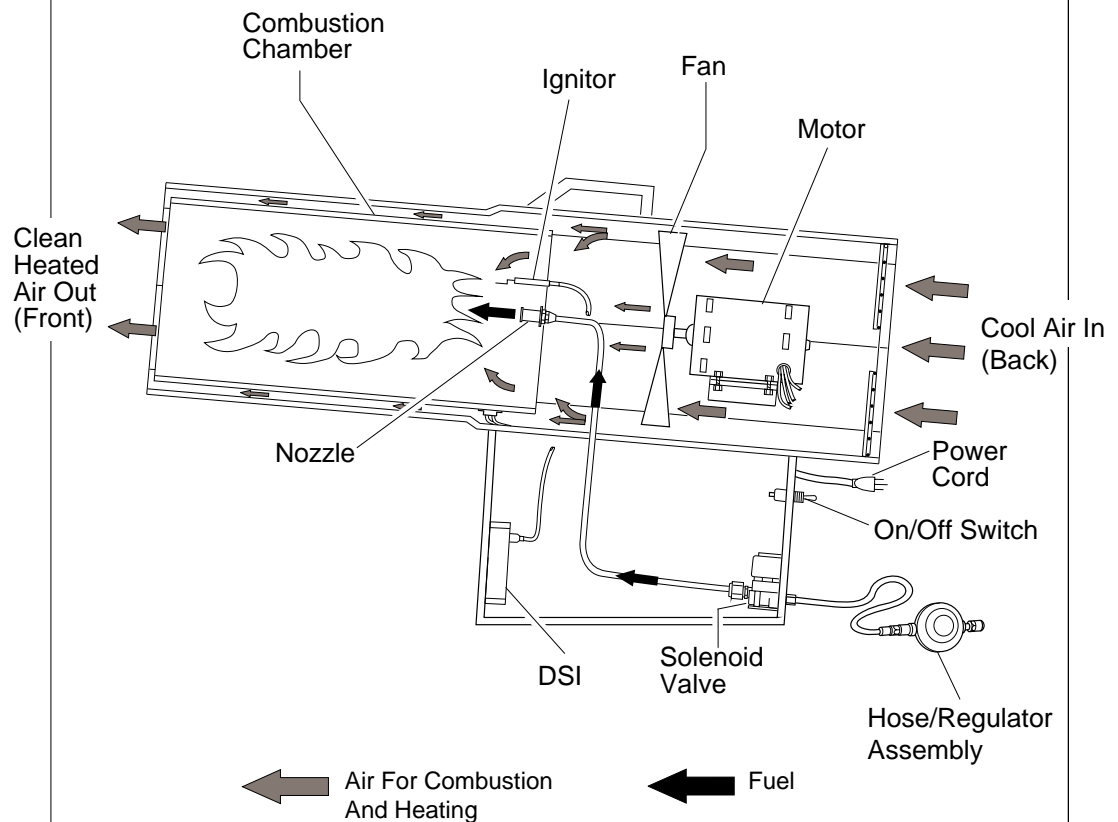


Figure 2 - Cross Section Operational View

PROPANE SUPPLY

Propane gas and propane tank(s) are to be furnished by the user.

Use this heater only with a propane vapor withdrawal supply system. See Chapter 5 of the *Standard for Storage and Handling of Liquefied Petroleum Gas, ANSI/NFPA 58* and/or *CAN/CGA B149.2*. Your local library or fire department will have this booklet.

The amount of propane gas ready for use from propane tanks varies. Two factors decide this amount:

1. The amount of propane gas in tank(s)
2. The temperature of tank(s)

The chart below shows the number of 100 pound tanks needed to run this heater. Do not operate this product with any tank smaller than 100 pounds.

	Temperature (°F) At Tank					
	32°	20°	10°	0°	-10°	-20°
Number of tanks	2	2	3	3	(Use larger tank)	

Less gas is vaporized at lower temperatures. You may need two or more 100 pound tanks or one larger tank in colder weather. Your local propane gas dealer will help you select the proper supply system. The minimum surrounding-air temperature rating for this heater is -20°F (-29°C).

INSTALLATION

⚠ WARNING

Review and understand the warnings in the Safety Information Section, pages 2 and 3. They are needed to safely operate this heater. Follow all local codes when using this heater.

⚠ WARNING

Test all gas piping and connections for leaks after installing or servicing. Never use an open flame to check for a leak. Apply a mixture of liquid soap and water to all joints. Bubbles forming show a leak. Correct all leaks at once.

1. Provide propane supply system (see *Propane Supply* above).
2. Connect POL fitting on hose/regulator assembly to propane tank(s). Turn POL fitting counterclockwise into threads on tank. Tighten firmly using wrench.
IMPORTANT: Tighten regulator with vent pointing down. Pointing vent down protects regulator from weather damage.

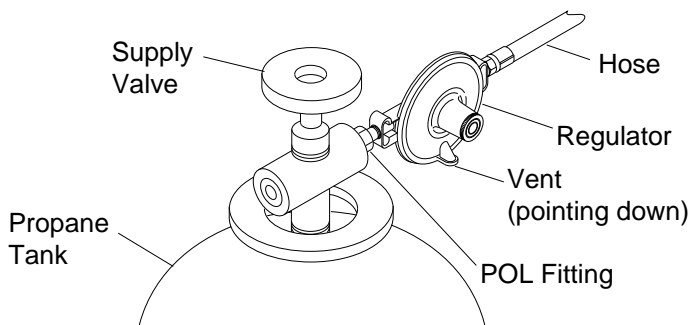


Figure 3 - Regulator With Vent Pointing Down

3. Connect hose to inlet connector. Tighten firmly using a wrench.
IMPORTANT: Extra hose or piping may be used if needed. Install extra hose or piping between hose/regulator assembly and propane tank. You must use the regulator supplied with heater.

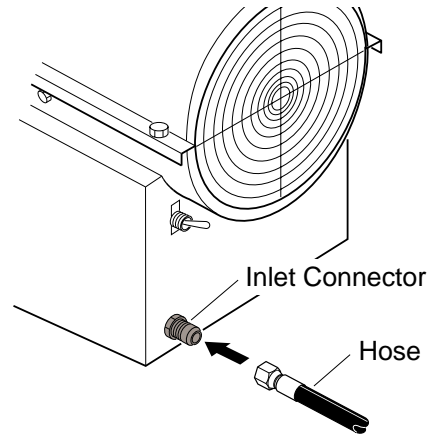


Figure 4 - Hose and Inlet Connector

4. Open propane supply valve on propane tank(s) slowly. **Note:** If not opened slowly, excess-flow check valve on propane tank may stop gas flow. If this happens, close propane supply valve and open again slowly.
5. Check all connections for leaks.

⚠ WARNING

Never use an open flame to check for a leak. Apply a mixture of liquid soap and water to all joints. Bubbles forming show a leak. Correct all leaks at once.

6. Close propane supply valve.

⚠ WARNING

Follow the minimum fresh, outside air ventilation requirements. If proper fresh, outside air ventilation is not provided, carbon monoxide poisoning can occur. Provide proper fresh, outside air ventilation before running heater.

VENTILATION

Provide a fresh air opening of at least four and one half (4.5) square feet. Provide extra fresh air if more heaters are being used.

Example: A 150,000 BTU/Hr heater requires one of the following:

- a two-car garage door raised six inches
- a single-car garage door raised nine inches
- two thirty-inch windows raised twelve inches

OPERATION

WARNING

Review and understand the warnings in the Safety Information Section, pages 2 and 3. They are needed to safely operate this heater. Follow all local codes when using this heater.

To Start Heater

1. Follow all installation, ventilation and safety information.
2. Locate heater on stable and level surface. Make sure strong drafts do not blow into front or rear of heater.
3. Plug power cord of heater into a three-prong, grounded extension cord. Extension cord must be at least six feet long. Extension cord must be UL listed.

Extension Cord Size Requirement

Up to 50 feet long, use 18 AWG rated cord.

51 to 100 feet long, use 16 AWG rated cord.

101 to 200 feet long, use 14 AWG rated cord.

4. Plug extension cord into a 120 volt/60 hertz, three-hole, grounded outlet.
5. Open propane supply valve on propane tank(s) slowly. **Note:** If not opened slowly, excess-flow check valve on propane tank may stop gas flow. If this happens, close propane supply valve and open again slowly.
6. Turn on/off switch to the ON position. Heater will start within twenty seconds. **Note:** If heater does not start, turn on/off switch to the OFF position. Wait ten seconds for safety control to reset, then try again.

To Stop Heater

1. Tightly close propane supply valve on propane tank(s). Allow heater to burn remaining fuel in hose.
2. Wait a few seconds. Heater will burn gas left in supply hoses.
3. Turn on/off switch to the OFF position.
4. Unplug heater.

STORAGE

CAUTION

Disconnect heater from propane supply tank(s).

1. Store propane tank(s) in safe manner. See Chapter 5 of *Standard for Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58* and/or *CAN/CGA B149.2*. Follow all local codes.
2. Place plastic cover caps over brass fittings on inlet connector and hose/regulator assembly.
3. Store in dry, clean, and safe place. Do not store hose/regulator assembly inside heater combustion chamber.
4. When taking heater out of storage, always check inside of heater. Insects and small animals may place foreign objects in heater. Keep inside of heater free from combustible and foreign objects.

MAINTENANCE

WARNING

Never service heater while it is plugged in, connected to propane supply, operating, or hot. Severe burns and electrical shock can occur.

1. Keep heater clean. Clean heater annually or as needed to remove dust and debris. If heater is dirty or dusty, clean heater with a damp cloth.
2. Inspect heater before each use. Check connections for leaks. Apply mixture of liquid soap and water to connections. Bubbles forming show a leak. Correct all leaks at once.
3. Inspect hose/regulator assembly before each use. If hose is highly worn or cut, replace.
4. Have heater inspected yearly by a qualified service agency.
5. Keep inside of heater free from combustible and foreign objects.

PREVENTATIVE MAINTENANCE SCHEDULE

WARNING

Never service heater while it is plugged in, connected to propane supply, operating, or hot. Severe burns and electrical shock can occur.

Item

How Often

How To

Fan

Clean every 500 hours of operation or as needed.

See Fan, page 10.

SERVICE PROCEDURES

Upper Shell Removal

1. Remove screws along each side of heater using 5/16" nut-driver. These screws attach upper and lower shells together.
2. Lift or slide upper shell off.
3. Remove fan guard.

Fan

IMPORTANT: Remove fan from motor shaft before removing motor from heater. The weight of the motor resting on the fan could damage the fan pitch.

1. Remove upper shell (see above).
2. Use 1/8" hex wrench to loosen setscrew which holds fan to motor shaft.
3. Slip fan off motor shaft.
4. Clean fan using soft cloth moistened with kerosene or solvent.
5. Dry fan thoroughly.
6. Replace fan on motor shaft. Make sure setscrew is touching back of flat surface on motor shaft (see Figure 7).
7. Place setscrew on flat of shaft. Tighten setscrew firmly (40-50 inch-pounds).
8. Replace fan guard and upper shell.

Ignitor

1. Make sure gap between ignitor electrode and burner nozzle is .13/.15". Access ignitor electrode from inside combustion chamber. No other maintenance is needed for ignitor.

⚠ WARNING

Never service heater while it is plugged in, connected to propane supply, operating, or hot. Severe burns and electrical shock can occur.

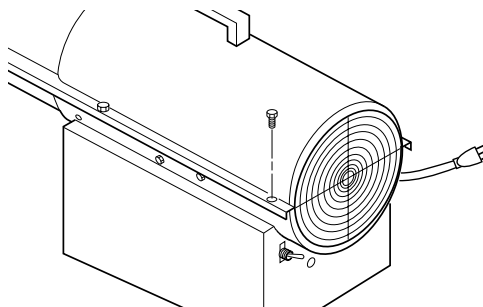


Figure 5 - Upper Shell Removal

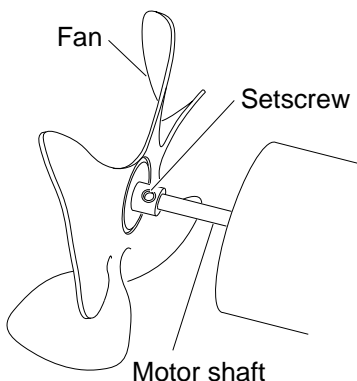


Figure 6 - Fan, Motor Shaft, and Setscrew Location

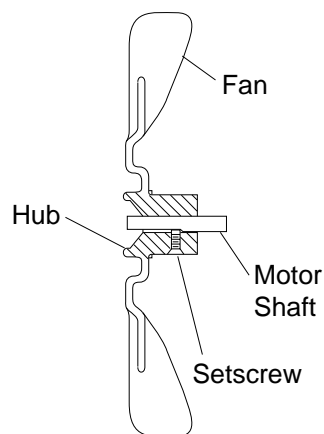
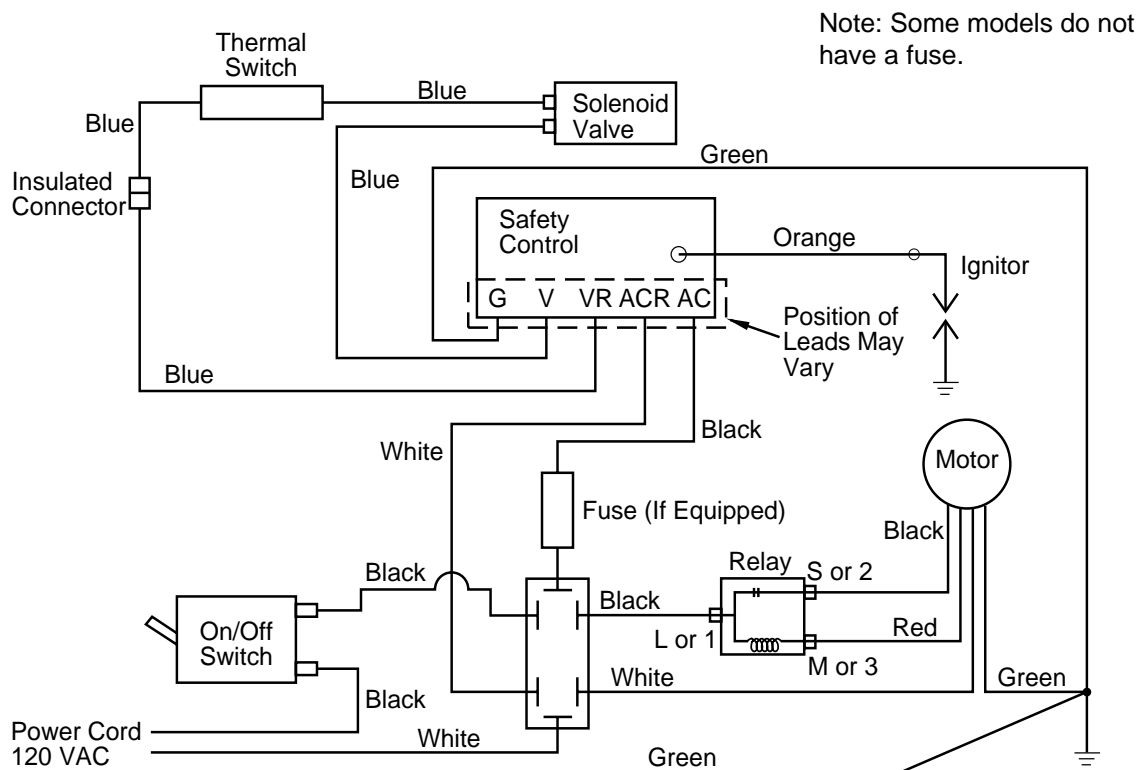


Figure 7 - Fan Cross Section

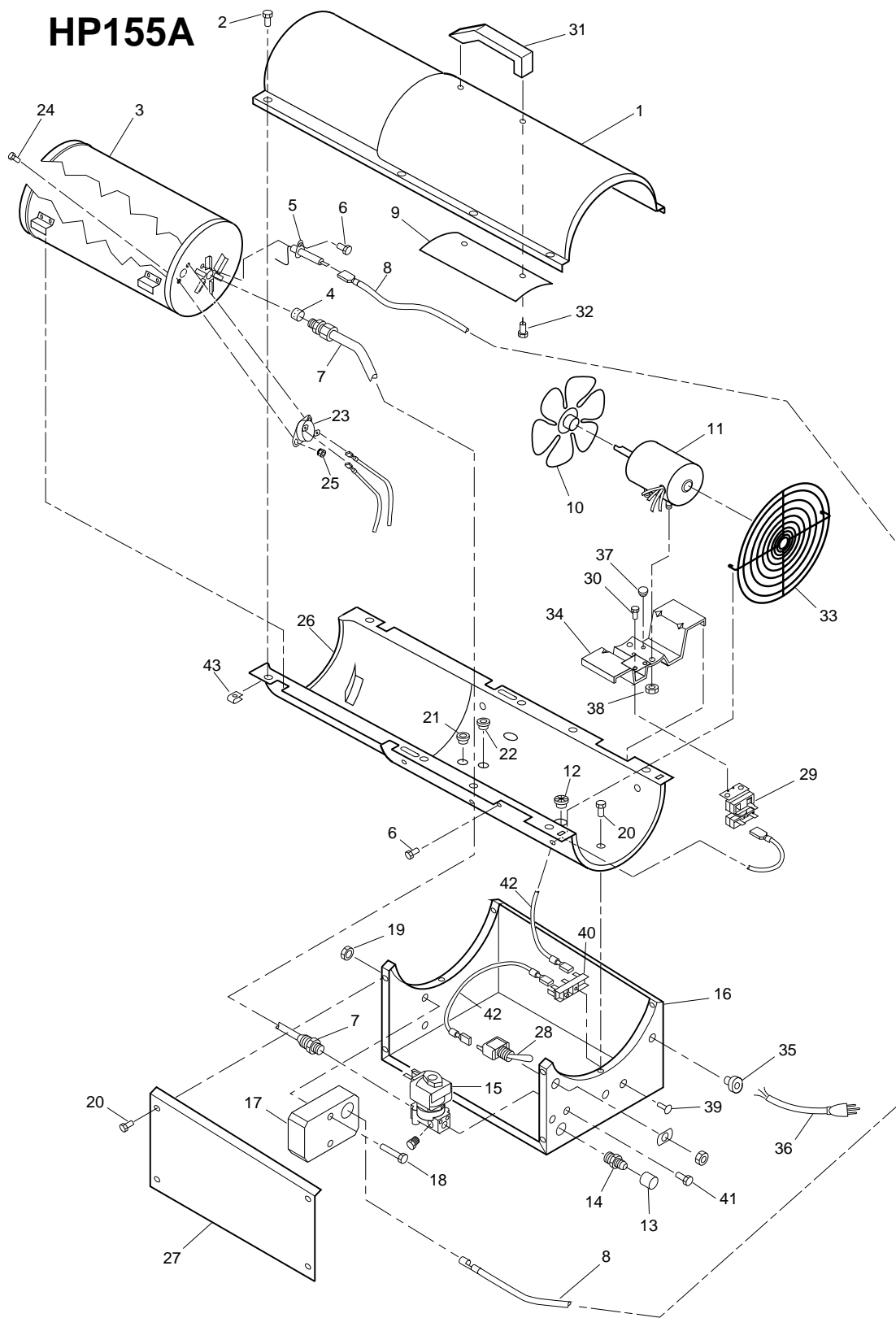
SPECIFICATIONS

Output Rating (BTU/Hr)	150,000
Fuel	Propane Vapor Only
Fuel Consumption	
Gallons/Hour	1.6
Pounds/Hour	7.0
Supply Pressure To Regulator	
Minimum (for purposes of input adjustment)	10 psi
Maximum	Tank Pressure
Regulator Outlet Pressure (Factory Preset)	13" WC
Manifold Pressure	9.75" WC
Hot Air Output (CFM Approx)	550
Motor	3,450 RPM, 1/8 HP
Electric Input	120 V/60 Hz
Amperage	2.2
Ignition	Direct Spark, Interrupted Type
Ignitor Gap (Inches)	.13/.15
Weight (Pounds)	
Heater	27
Shipping	36
Size - L x W x H (Inches)	36 x 14.5 x 20

WIRING DIAGRAM



ILLUSTRATED PARTS BREAKDOWN HP155A



Note: Screws are standard hardware items

PARTS LIST

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	01086-01	Upper Shell, Model HP155A	1
2	00529-16	Screw, #10-16 x 1/2"	8
3	A-03326-45	Combustion Chamber Kit	1
4	03326-37	Nozzle	1
5	03326-34	Ignitor	1
6	01086-32	Screw, #8-18 x 3/8"	2
7	A-03326-46	Fuel Tube Kit	1
8	03326-15	Ignitor Cable	1
9	00529-45	Heat Shield	1
10	00531-28	Fan	1
11	03326-32	Motor	1
12	03326-14	Universal Bushing	1
13	01086-26	Sleeve Cap	1
14	03326-06	Male Connector	1
15	03326-33	Solenoid Valve	1
16	03326-19	Base	1
17	03326-07	DSI Control	1
18	03326-21	Screw, #6-32 x 1"	2
19	03326-09	Hex Nut, #6-32	2
20	00529-11	Screw, #10-16 x 1/2"	10
21	03326-03	Shorty Bushing	1
22	03326-04	Shorty Bushing	1
23	A-03326-16	Thermal Limit Switch	1
24	03326-20	Screw, #4-40 x 1/2"	2
25	01086-30	Hex Nut, #4-40	2
26	03326-48	Lower Shell, Model HP155A	1
27	03326-18	Side Cover	1
28	01086-42	On/Off Switch	1
29	01086-13	Relay Kit	1
30	01145-18	Screw, #8-32 x 1/4"	2
31	00529-44	Handle	1
32	00529-12	Screw, #10-16 x 3/4"	2
33	03326-17	Fan Guard	1
34	01086-12	Motor & Relay Support Bracket Assy.	1
35	00529-13	Strain Relief Bushing	1
36	A-03326-23	Power Cord	1
37	00529-38	Rubber Bumper	2
38	00529-49	Lock Nut	2
39	03326-38	Break Mandrell Rivet, 3/16"	1
40	03326-29	Terminal Board	1
41	03326-01	Screw, #10-32 x 1/4"	2
42	A-03326-08	Wire Assembly	2
43	00529-14	Clip Nut	8
PARTS AVAILABLE - NOT SHOWN			
	03326-49	General Information Decal	1
	A-03326-50	Regulator & Hose Assembly	1
	A-03326-51	10' Hose Assembly	1
	03326-52	Regulator	1
	03326-53	Fuel Gas Connector	1
	03326-54	Thermostat	1

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CUSTOMER ASSISTANCE

**FOR THE LOCATION OF YOUR NEAREST HOMELITE SERVICING DEALER IN THE
UNITED STATES, PUERTO RICO, AND THE VIRGIN ISLANDS**

CALL: 1-800-242-4672

**NOTE: DEALER INFORMATION, TECHNICAL ADVICE, AND PRODUCT
INFORMATION CAN BE OBTAINED AT THIS NUMBER.**

HEADQUARTERS

HOMELITE
P.O. BOX 7047
CHARLOTTE, N.C. 28241

OVERSEAS OFFICES

NETHERLANDS

**HOMELITE
ATLANTIC**
(HDQS. — Europe, Africa and Middle East)
Haverstraat 24
2153 GB Nieuw Vennep
The Netherlands

FRANCE

HOMELITE
S.A.R.L.
Z.I. du Vert-Galant
Rue du Chateau/Rue de la Garenne
95310 Saint-Quen-L'Aumone
France

AUSTRALIA

**HOMELITE
PACIFIC LIMITED
HEADQUARTERS**
22 Terra-Cotta Drive
Blackburn, 3130
Victoria, Australia

CANADIAN OFFICES

**HOMELITE
CANADA LIMITED**
1850 55th Avenue
Lachine, Quebec, Canada
H8T 3J5

212-214 590 Ebury Place
New Westminster, British Columbia
V3M 6K7

595 Canarctic Drive
Toronto, Ontario
M3J 2P9